

General

Title

Diagnosis and treatment of ischemic stroke: percentage of patients with stroke symptoms who undergo a CT scan within 25 minutes of arrival in the emergency department.

Source(s)

Anderson D, Larson D, Bluhm J, Charipar R, Fiscus L, Hanson M, Larson J, Rabinstein A, Wallace G, Zinkel A. Diagnosis and initial treatment of ischemic stroke. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jul. 122 p. [238 references]

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients age 18 years and over initially presenting with acute symptoms of ischemic stroke who undergo a computed tomography (CT) scan within 25 minutes of arrival in the emergency department.

Rationale

The priority aim addressed by this measure is to increase the percentage of patients age 18 years and over receiving appropriate thrombolytic and appropriate antithrombotic therapy for ischemic stroke (tissue plasminogen activator [tPA] and aspirin, other antiplatelet agents, or an anticoagulant).

Stroke is the fourth leading cause of death, recently dropping from third after decades long efforts to reduce incidence by treatment of risk factors. It remains the leading cause of disability among adults. Costs of hospitalizations, other cares and lost wages are simply enormous.

The National Institutes of Health (NIH) recommendation for the timing of "door to initiation of computed tomography [CT] scan" for thrombolytic candidates is within 25 minutes.

Evidence for Rationale

Anderson D, Larson D, Bluhm J, Charipar R, Fiscus L, Hanson M, Larson J, Rabinstein A, Wallace G, Zinkel A. Diagnosis and initial treatment of ischemic stroke. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jul. 122 p. [238 references]

Primary Health Components

Ischemic stroke; computed tomography (CT)

Denominator Description

Number of patients presenting with acute symptoms of ischemic stroke (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of patients who had a computed tomography (CT) scan within 25 minutes of arrival in the emergency department

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Emergency Department

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Timeliness

Data Collection for the Measure

Case Finding Period

The time frame pertaining to data collection is monthly.

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Number of patients presenting with acute symptoms of ischemic stroke

Population Definition: Patients age 18 years and older.

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of patients who had a computed tomography (CT) scan within 25 minutes of arrival in the emergency department

Exclusions

Unspecified

Numerator Search Strategy

Encounter

Data Source

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Percentage of patients with stroke symptoms who undergo a computed tomography scan within 25 minutes of arrival in the emergency department.

Measure Collection Name

Submitter

Institute for Clinical Systems Improvement - Nonprofit Organization

Developer

Institute for Clinical Systems Improvement - Nonprofit Organization

Funding Source(s)

The Institute for Clinical Systems Improvement's (ICSI's) work is funded by the annual dues of the member medical groups and five sponsoring health plans in Minnesota and Wisconsin.

Composition of the Group that Developed the Measure

Work Group Members: David Anderson, MD (*Work Group Co-Leader*) (University of Minnesota Physicians and Hennepin County Medical Center) (Neurology); David Larson, MD, FACEP (*Work Group Co-Leader*) (Ridgeview Medical Center) (Emergency Medicine); Gail Wallace, NP (Essentia Health) (Nursing); Lynne Fiscus, MD, MPH (Fairview Health Services) (Internal Medicine and Pediatrics); Andrew Zinkel, MD (HealthPartners Medical Group and Regions Hospital) (Emergency Medicine); Ron Charipar, MD (Marshfield Clinic) (Internal Medicine and Pediatrics); Alejandro Rabinstein, MD (Mayo Clinic) (Neurology); Jeff Larson, PharmD (Park Nicollet Health Services) (Pharmacy); Myounghee Hanson, BA (Institute for Clinical Systems Improvement) (Clinical Systems Improvement Facilitator); Jim Bluhm, MPH (Institute for Clinical Systems Improvement) (Team Director)

Financial Disclosures/Other Potential Conflicts of Interest

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National, Regional, Local Committee Affiliations: NNINDS NHLBI as an event adjudicator for two clinical trials: SAMMPRIS (Stenting Versus Aggressive Medical Management for Preventing Recurrent Stroke), and AIM-HIGH (Atherothrombosis Intervention in Metabolic Syndrome with Low HDL Cholesterol/High Triglyceride and Impact on Global Health Outcomes)

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: MN Acute Stroke Systems Council, MDH and member of MN Time Critical Care Committee, MDH

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Professor, Internal Medicine, Marshfield Clinic

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

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National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

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National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: Clinical Advisory Panel Leader, TogetherMD, LLC, MN Acute Stroke Systems Council, MDH and member of MN Time Critical Care Committee, MDH

Jeff Larson, PharmD (Work Group Member)

Staff Pharmacist, Pharmacy, Park Nicollet Health Services

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

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Professor, Neurology, Mayo Clinic

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: Cardionet, MCOT use for an investigator-initiated project

Financial/Non-Financial Conflicts of Interest: Member of the Data Safety Monitoring Board for the PREVAIL study by ARTITECH (now Boston Scientific)

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Neurology Nurse Practitioner, Nursing, Essentia Health East Region

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

Andrew Zinkel, MD (Work Group Member)

Section Head and Medical Director of Quality, Department of Emergency Medicine, HealthPartners Medical Group and Regions Hospital

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: Clinical Advisory Panel Leader, TogetherMD, LLC

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2012 Jul

Measure Maintenance

Scientific documents are revised every 12 to 24 months as indicated by changes in clinical practice and literature.

Date of Next Anticipated Revision

The next scheduled revision will occur within 24 months.

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in January 2016.

Measure Availability

Source available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#)

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NQMC Status

This NQMC summary was completed by ECRI Institute on November 14, 2012.

The information was reaffirmed by the measure developer on January 13, 2016.

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Production

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